novaform® GB
High Performance Metal Bead Gaskets.

Material profile

High performance metal bead gaskets novaform® GB consist of thin sheet metal with or without elastomeric coating applied in a coil-coating process. The gaskets are stamped and embossed in a sequential cutting machine.

- **For small bridges**
- **Even at low surface pressures**
- **Almost no setting - permanently tight**

Performed beads in novaform® GB ensure the macro adaptation of the metal gaskets to the sealing surfaces. A special elastomer coating on the steel sheet ensures the gaskets' micro sealing. The combination of different materials guarantees that the joint is permanently tight even with low bolt loads or unfavourable thermal and mechanical conditions.

Application areas

- **Automotive secondary gaskets**
  - **passenger vehicle engines**
  - **commercial vehicle engines**
  - **engine components**
  - **exhaust systems**
  - **powertrain**
- **Industrial applications**
  - **gearboxes**
  - **compressors**
  - **pumps**
  - **motors**
  - **other aggregates**

Good for people and the environment

The Frenzelit Automotive Gasket Division has obtained certification that the company complies with the requirements of ISO/TS 16949, ISO 9001, ISO 14001 and ISO 50001. This means complete transparency in all areas and therefore provides a high degree of security – for the benefit of our employees, the environment and our customers.

If you have any application engineering questions, we will be delighted to answer them. Just contact:
automotive@frenzelit.com

GASKETS

TECHNICAL TEXTILES

EXPANSION JOINTS

INSULATION

NEW MATERIALS

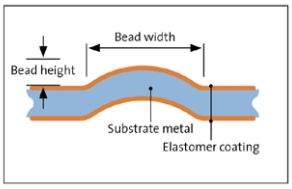
Frenzelit
creating hightech solutions

Technical information about novaform® GB

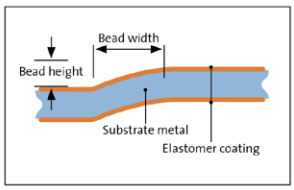
Design

The material consists of a steel sheet and an elastomer coating on both sides.

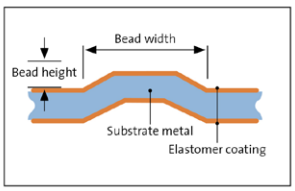
Full bead



Half bead



Trapezoidal bead



Example

novaform® GBS - bs NBR TYP 25/XX

General data

Colour	black
Material no.	1.0330
Anti-stick coating	standard PTFE based coating on both sides

Physical properties Gasket thickness 0.33 mm	**Standard**	**Unit**	**Value***
Thickness of base material Thickness tolerance	B acc. DIN EN 10 140	[mm]	0.25
novaform® GBS-bs NBR TYP 25/50 Total thickness of coating Total thickness		 [mm] [mm]	 0.060 ± 0.010 0.37
novaform® GBS-bs NBR TYP 25/35 Total thickness of coating Total thickness		 [mm] [mm]	 0.042 ± 0.007 0.33
novaform® GBS-bs NBR TYP 25/25 Total thickness of coating Total thickness		 [mm] [mm]	 0.032 ± 0.007 0.31
Tensile strength Temperature resistance (following the automotive specification)	EN 10002 T1 Frenzelit 0110019	[N/mm²] [°C]	565 ± 75 -25/+160
Chemical resistance	ASTM F 146		
Engine Oil SAE 10 W 40 Change in thickness Change in weight	5 h / 150 °C	 [%] [%]	 1* 1*
ASTM Fuel B Change in thickness Change in weight	5 h / 23 °C	 [%] [%]	 10* 2*
Water / Glycol (50:50) Change in thickness Change in weight	5 h / 100 °C	 [%] [%]	 7* 2*
			* Modal value (typical value)

Design possibilities

Base material

Materials	Base materials	Thicknesses
novaform® GBS	carbon steel	0.25 mm
novaform® GBC	stainless steel, rolled to higher tensile strength	0.20/0.25/0.30 mm

Further base materials and thicknesses are available on request.

Coatings

Coatings	Thicknesses of coating	
NBR	25 / 35 / 50 µm	black, optional with green covering colour
FPM	20 / 30 µm	with blue covering colour on one side
HPG	10 / 20 µm	high-temperature coating

Further thicknesses of coating and materials are available on request.

Material profile

- Cold rolled strip DC 01 C490 acc. to DIN EN 10140, steel thickness 0.25 mm
- Steel sheet with highly oil and fuel resistant NBR coating as well as anti-stick coating
- To be used as cut gaskets and/or gaskets with beads
- Available with half or full beads with typical height of 100 to 400 µm and a width 1.5 - 2.5 mm

Engineering and Service

Frenzelit is specialised in manufacturing gaskets to specification. With state-of-the-art technical systems at hand, e.g. various CAD systems and a FEM simulation software, the required products can be adjusted to the exact requirements of the applications in question. Prototypes for testing purposes are manufactured in small lot sizes and at short notice. In this way we are able to develop the best possible solutions for all kinds of flat gasket applications for and together with our customers.

Frenzelit GmbH
P.O. Box 11 40
95456 Bad Berneck
Germany
Phone +49 9273 72-0
Fax +49 9273 72-220
info@frenzelit.com
www.frenzelit.com

Frenzelit
creating hightech solutions